

B. AIR QUALITY AND GLOBAL CLIMATE CHANGE

Global Climate Change and Local Response

Air pollution can have serious consequences for the health of human beings and also affects natural ecosystems. In particular, air pollution often contains greenhouse gases (GHGs) which work in the same way as the glass in a greenhouse to trap heat within the earth's atmosphere. Santa Barbara County is committed to reducing its air pollution and greenhouse gas (GHG) emissions to meet state mandates and local objectives and has developed guiding principles to align County decision-making with the objectives of the State to address climate change.

With regard to land use and its role in GHG and air pollution reductions, determining how and where the urban environment is developed plays a major role in air quality. For example, buildings that are not energy efficient contribute negatively to air quality. Likewise, land use patterns that isolate residential uses from destinations require increased vehicle trips and miles traveled on local roadways. Taken together, land use planning is one important component of a sustainable community to ensure long-term air quality and climate change solutions.

Accordingly, land use and development patterns that reduce the number of vehicle trips and distance of vehicle trips regionally are prioritized. To do so, this Plan provides for residential, commercial, and recreational development that is compact and interconnected by multimodal transportation infrastructure. As a result, residents, business owners, and visitors will have safe and accessible opportunities to get from here to there without the use of a motor vehicle or with a shorter distance traveled by motor vehicle.

Additionally, this Plan prioritizes resource efficiency, including energy, solid waste, and water usage, in all development to reduce the GHG and air pollution contributions from the built environment. The built environment, when designed and constructed to be energy and resource efficient, is an important part of a sustainable community. Techniques and technologies to effectuate this type of built environment include, but are not limited to, the following:

- Energy efficient and low-emission residential and commercial water heaters and space heaters
- Solar panels for residential energy production and water heating systems and other facilities and/or the use of “on-demand” water heaters
- Low-flow water fixtures
- Non-toxic and sustainably sourced building materials
- Passive solar cooling/heating
- Natural lighting
- Non-volatile or non-polluting materials for public improvements

- Energy efficient appliances
- Energy efficient lighting
- Urban forestry and tree planting programs
- Landscaping to shade buildings and parking lots
- Sidewalks and bike paths to increase non-vehicle trips
- Convenient secure bus stops to increase appeal and use of public transportation
- Commercial services located within walking distance of neighborhoods

Health Effects of Air Pollution

In addition to impacts on the natural environment and the global climate, air pollutants have health effects on humans in the built environment. Effects range from eye irritation to respiratory diseases such as emphysema or asthma. Carbon monoxide (CO), ozone (O₃), and mono nitrogen oxides (NO_x), when absorbed into the bloodstream, reduce the oxygen carrying ability of hemoglobin. Suspended particulate matter can trigger respiratory diseases such as asthma, bronchitis, and lung cancer.

Air quality is affected by urban and industrial developments (stationary sources) and motor vehicles (mobile sources). As in most urban areas, high short term concentrations of carbon monoxide (CO), known as "hot spots," can be a problem in Eastern Goleta Valley. Hot spots typically occur in areas of high motor vehicle use, such as in parking lots, at intersections, and along freeways. In addition to the County's goals for GHG reduction, these reductions also correlate to the reduction of impacts to human health from air pollution locally. By reducing the total number of average daily vehicle trips, the number of vehicle miles traveled, and the contribution of GHGs and other air pollutants from development, this plan addresses impacts to the global climate and local public health, safety, and quality of life.

Please note that Air Quality is also addressed through recommendations in the Transportation and Circulation section of this Plan.

Land Use and Development Policies and Implementation Strategies

GOAL #11. LOCAL LAND USE AND DEVELOPMENT DO NOT CONTRIBUTE ADVERSELY TO REGIONAL AIR QUALITY OR GLOBAL CLIMATE CHANGE.

OBJECTIVE AQ-EGV-1: Reduce locally-produced air pollution and greenhouse gases.

EASTERN GOLETA VALLEY COMMUNITY PLAN

- Policy AQ-EGV-1.1:** The County shall impose appropriate restrictions on construction activities associated with development to avoid deterioration of air quality.
- DevStd AQ-EGV-1A:* *Development shall minimize the generation of pollution and fugitive dust during construction.*
- Policy AQ-EGV-1.2:** The County shall support transportation plans and land use patterns that reduce vehicle trips and total vehicle miles traveled.
- Policy AQ-EGV-1.3:** The County shall require development to minimize energy needs and air pollution generated during construction and operational phases.
- DevStd AQ-EGV-1B:* *The County shall require energy and resource-conserving designs and/or techniques.*
- DevStd AQ-EGV-1C:* *The County shall implement those land use patterns and transportation programs which will serve to reduce vehicle trips and total vehicle miles traveled. This includes, but is not limited to the following:*
- *Include design features to encourage alternate transportation modes.*
 - *For pedestrians: sidewalks; safe street and parking lot crossings; shade trees; off street breezeways, alleys, and over crossings; placement of parking lots and building entrances to favor pedestrians rather than cars; shower and locker facilities.*
 - *For transit riders: all of the above plus safe, sheltered transit stops with convenient access to building entrances.*
 - *For bicyclists: theft proof and well-lighted bicycle storage facilities with convenient access to building entrance; on-site bikeways between buildings or uses; shower and locker facilities.*
 - *For carpools and vanpools: preferential parking.*
 - *Provide incentives, such as fee reduction, for transit service enhancements to serve the project (express bus service, bike racks on buses).*
 - *Bikeway improvements.*
 - *Pedestrian improvements serving the project (addition of sidewalks, pedestrian crossings).*

DevStd AQ-EGV-ID:

To reduce overall trip generation and associated air contaminant emissions, future commercial tenants requiring more than fifty employees shall be required to work with Traffic Solutions, a division of SBCAG, to establish and maintain an employee trip reduction program. Traffic Solutions aims to reduce traffic congestion, air pollution, and vehicle miles driven in the County partly by promoting cooperation between businesses, government agencies, and community groups and individuals and to expand commuter program participation (Traffic Solutions 2007). Traffic Solutions provides free employee trip reduction services for employers, including employee surveys, employee education, automated commuter matching, and regional transit solutions. The employee trip reduction program implemented by future tenants should be informed by consultation with Traffic Solutions and should include the following elements:

- Install bicycle racks and/or bicycle lockers at a ratio of one bicycle parking space for every ten car parking spaces for customers and employees.*
- Post carpool, vanpool and transit information in employee break/lunch areas.*
- Employ or appoint an Employee Transportation Coordinator.*
- Implement a Transportation Choices Program. Project applicants should work with the Transportation Choices Coalition partners for free consulting services on how to start and maintain a program. Contact Traffic Solutions.*
- Provide for shuttle/mini bus service.*
- Provide incentives to employees to carpool/vanpool, take public transportation, telecommute, walk, bike, etc.*
- Implement compressed work schedules.*
- Implement telecommuting program.*
- Implement a lunchtime shuttle to reduce single occupant vehicle trips.*
- Include teleconferencing capabilities, such as web cams or satellite linkage, which will allow employees to attend meetings remotely without requiring them to travel out of the area.*
- Provide on-site eating, refrigeration, and food-vending facilities to reduce employee lunchtime trips.*
- Provide preferential carpool and vanpool parking spaces.*

EASTERN GOLETA VALLEY COMMUNITY PLAN

- *Provide shower and locker facilities to encourage employees to bike and/or walk to work (typically one shower and three lockers per every 25 employees).*
- *Provide off-site improvements to offset contaminant emissions, including: retrofitting existing homes and businesses with energy-efficient devices, replacing transit or school buses, contributing to alternative fueling infrastructure, and/or improving park and ride lots.*

Policy AQ-EGV-1.4: The County should continue to work with state and local officials to reduce air pollution attributable to marine shipping routes off the coast of Eastern Goleta Valley.

OBJECTIVE AQ-EGV-2: Protect sensitive populations from air pollution.

Policy AQ-EGV-2.1: Sensitive receptor populations shall be protected from sources of air pollution.

DevStd AQ-EGV-2A: *Development that provides housing or care facilities shall establish adequate buffers from sources of air pollution. Future projects shall be designed to minimize exposure to roadway-related pollutants, and exposure shall be mitigated to the maximum extent feasible. Design features may include but not be limited to maximizing the distance between the roadway and sensitive receptors, locating air intake at the non-roadway facing sides of buildings, and ensuring that windows nearest to the roadway do not open. Mitigation measures may include installing mechanical ventilation systems with fresh air filtration and constructing a physical barrier between the roadway source and receptors of pollutants (e.g., sound wall or vegetative planting).*

DevStd AQ-EGV-2B: **Ventilation Systems:** *Ventilation systems that are rated at Minimum Efficiency Reporting Value of “MERV13” or better for enhanced particulate removal efficiency shall be provided on all residential units located within 500 feet of U.S. 101. The residents of these units shall also be provided information regarding filter maintenance/replacement. The County Permit Compliance staff shall ensure that the aforementioned requirements are included on plans submitted for approval of any Land Use and Building permits and shall verify compliance onsite prior to occupancy clearance. Staff shall also review the future Covenants, Conditions, and Restrictions (CC&Rs) for inclusion of guidelines pertaining to the proper maintenance/replacement of filters.*

EASTERN GOLETA VALLEY COMMUNITY PLAN

DevStd AQ-EGV-2C:

Air Quality Disclosure Statement: Future project applicants of residential developments within 500 feet of U.S. 101 shall provide an Air Quality Disclosure Statement to potential buyers of units, summarizing the results of technical studies that reflect a health concern resulting from exposure of children to air quality emissions generated within 500 feet of the freeway. The future project applicant shall provide this disclosure statement as part of the project CC&Rs to County Counsel and Planning & Development to verify the disclosure statement is fair and adequate. The disclosure shall be reviewed and approved prior to any Land Use and Building permits. The County Permit Compliance staff shall verify that the Air Quality Disclosure Statement has been incorporated into the CC&Rs prior to sale of homes. Planning & Development shall review and approve the statement for objectivity, balance, and completeness.

DevStd AQ-EGV-2D:

An Odor Abatement Plan (OAP) shall be submitted as part of a permit application for projects anticipating significant odors. The SBCAPCD inspectors are required to respond to public nuisance under the SBAPCD Rule 303, and may review the OAP for adequacy in mitigating potential nuisance odor impacts from a project. OAPs should include the following elements:

- a) Name and telephone number of contact person(s) at the facility responsible for logging in and responding to odor complaints.
- b) Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the staff on how to respond.
- c) Description of potential odor sources at the facility.
- d) Description of potential methods for reducing odors, including minimizing idling of delivery and service trucks and buses, process changes, facility modifications and/or feasible add-on air pollution control equipment.
- e) Contingency measures to curtail emissions in the event of a public nuisance complaint.

DevStd AQ-EGV-2E:

Wood-burning Fireplaces: No wood-burning fireplaces shall be included in the design of future development. Only natural gas fireplaces shall be permitted.